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AUG 16 2011

FCC Mail Room

August 10, 2011

Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Attention: Marlene H. Dortch,  
Secretary

**RE: LIGHTSQUARED LLC**

**SIKAND**

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Dear Ms. Dortch:

As a licensed Professional Engineer in California, I must express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

It is my understanding that:

1. The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.
2. High-precision GPS equipment used by Land Surveyors, Civil Engineers, farmers, and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way we build and manage our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc.
3. In California alone, over 4,000 licensed Professional Land Surveyors and 68,000 licensed Engineers use high-precision GPS equipment in their everyday field work. GPS has become an essential tool for design professionals and it is imperative that these GPS signals are not jeopardized by broadband technology.

The FCC must make clear, and the NTIA (National Telecommunications and Information Administration) must ensure, that LightSquared's license modification is contingent on the outcome of the mandated study unequivocally demonstrating that there is no interference to GPS. The study must be comprehensive, objective, and based on correct assumptions about existing GPS uses

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rather than theoretical possibilities. Given the substantial pre-existing investment in GPS systems and infrastructure, and the critical nature of GPS applications, the results of the study must conclusively demonstrate there is no risk of interference. If there is conflicting evidence, doubts must be resolved against the LightSquared terrestrial system.

This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for California, but for the United States as a whole. I urge the FCC to reject LightSquared's request and rescind the conditional waiver.

Best Regards,



Ronald R. Horn, RCE 16913  
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